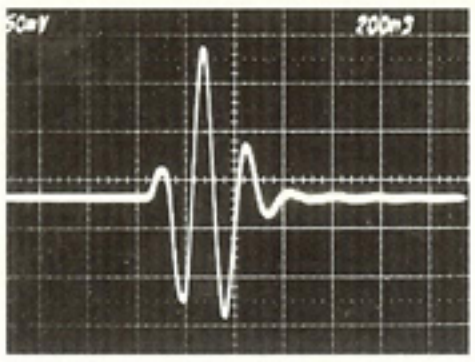
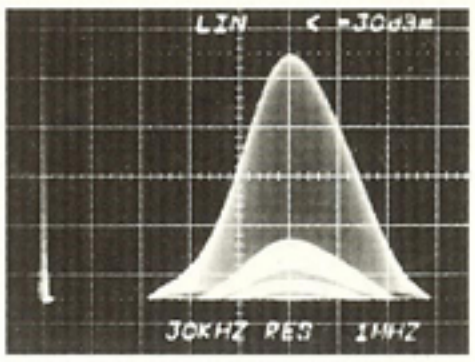
Technical Information

Technisonic Research manufactures six series of standard transducers: General Purpose (GP); High Resolution (HR); Super High Resolution(SHR); Very High Resolution (VHR); Composite (CMP) and Super Punch (SP). Please refer to the information below to determine which series is best suited for your application. If in doubt, please call for assistance.

General Purpose Series (GP)

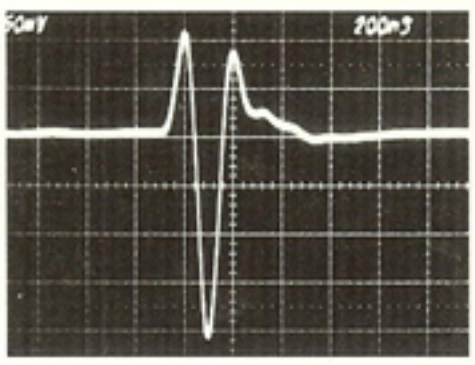
The General Purpose Series is recommended for the majority of pulse-echo applications. Typically having two to three full ring cycles, they offer the best combination of gain and resolution. These transducers are tuned to provide the best balance between gain and resolution for general purpose testing, with a bandwidth of 30 to 60 percent at -6 dB.

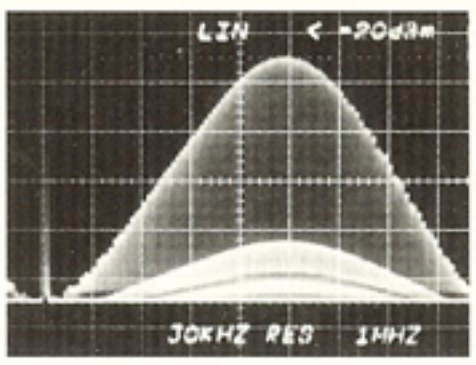




High Resolution Series (HR)

The High Resolution Series are broadbanded transducers, making them an excellent choice for thickness gaging applications. While gain is somewhat lower than the General Purpose Series, they are damped to the limits of current technology, exhibiting one or two ring cycles with a bandwidth of 60 to 100 percent at -6 dB.





Very High Resolution Series (VHR)

For applications requiring detection of small, near-surface defects, the VHR Series is recommended. This series offers increased sensitivity while maintaining the high-damped characteristics of the HR Series. Typical bandwidth is 50 to 100 percent at -6 dB.

Super High Resolution Series (SHR)

Technisonic has developed the Super High Resolution Series of immersion transducers to satisfy the requirements of General Electric, Pratt & Whitney, ALCOA, Rolls Royce, Northrop, McDonnell Douglas, etc. These are highly specialized transducers primarily designed for the detection of small, near-surface defects.

Super Punch Series (SP)

The Super Punch Series provides maximum gain for penetration of highly attentuative or very thick materials. They have little or no damping and a tuning network coupled with piezoelectric crystals designed for very high output. These narrow band transducers have less resolution than the General Purpose Series. Typical bandwidth is 20 to 40 percent at -6 dB.

Composite Series (CMP)

This series features a piezocomposite element which results in transducers with greater sensitivity, increased signal-to-noise ratio, deeper penetration and better resolution in highly attenuative materials. Typical bandwidths range from 50 to 100 percent at -6 dB.